


Li Quan Khoo

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Experience

Research Intern

June 2014 - August 2014

Microsoft Research Cambridge

8-week research internship through the Bright Minds Intern Competition programme for undergraduates, in the Machine Learning and Perception research group.

I worked on Project SmartFence - an application of machine learning on Bing data for personalized web access control. Users block and allow the sites they know and SmartFence infers the suitability of the rest of the web. Delivered a concept prototype for the OneWeek company-wide hackathon. Currently working on first-name publication.

Project supervisors: [Pushmeet Kohli](#), [Yoram Bachrach](#) | Project members: [Ulrich Paquet](#), [Filip Radlinski](#)

Software Developer

June 2013 - 2014

Unientry.Ltd

Delivered a pilot site for sixth form students and their teachers/mentors to find the right university for them. The platform publishes and filters information from the Higher Education Statistics Agency and gives recommendations based on students' perceived ability from their registered information and grades.

Scope: ~3 months + support | Team size: 3 | URL: <http://www.unientry.org>

Research Project: Task identification in search engine query logs

Jan 2014 - Apr 2014

UCL

Research on methods to find what users want to know most when querying for something belonging to a certain "class" in a search engine, using search engine logs and the semantic web. For instance, the search "hotels in Hawaii" would map the string "hotels in" to the class <place>. We can then query these hierarchical classes to find tasks users commonly associate with them. Awarded best research work / presentation amongst our year.

Scope: ~3 months lit review, ~3 months research | Team size: 1-4

SynthJS - Music made quick

Dec 2013 - present

An experiment in music synthesis and representation using HTML5-based technologies and an exercise in UI design.

I intended to turn it into a JavaScript application to let people synthesize music quickly with little to no musical knowledge required - and then transform their creation into a personalized rhythm game. Progress is currently halted due to UI scaling performance issues.

Site: <http://lqkhoo.com/synthjs> | Dev diary: <http://lqkhoo.com/wiki/index.php/Dev.SynthJS> | Github: <https://github.com/lqkhoo/SynthJS>

Project: RoboHome

Sep 2012 - May 2013

UCL

To develop a home automation platform capable of controlling devices locally, as well as remote surveillance. Platform is capable of controlling Arduino, Gadgeteer, and Wiimo (Belkin) devices, and has limited voice recognition functions. Remote component is hosted on Azure, local server is a Raspberry Pi running ArchLinux, which our Flask-based Python backend runs on.

Scope: ~9 months | Team size: 5 | Project site: http://comp2013group7.wikia.com/wiki/Comp2013group7_Wiki

JP Morgan Spring Week 2013

Apr 2013

To implement a performant volatility calculator for a stream of options prices (to estimate the inverse of the Black-Scholes algorithm). Implementation was in Java, core algorithm is a simple Newton-Raphson iterator. Team awarded second best for code performance and code review, and best for presentation.

Scope: ~8 hours | Team size: 4

JP Morgan Code for Good Challenge 2012

Nov 2012

Code jam to develop a clip art application to raise awareness about nature in cities. Final application uses HTML5 canvas (Kinetic.js) with a PHP backend for uploads.

Scope: 48 hours | Team size: 4 | Source: <https://github.com/horaceli/naturegram>

Robot Race 2012

UCL Computer Science

To program a maze-solving robot in C. Final algorithm is based on a wall-follower. Team placed 10th out of 30.

Scope: ~3 months | Team size: 2

Project: Android App 2012

UCL Computer Science

To develop an Android app for the Restless Beings charity to conduct field studies on children in poorly-developed countries.

Scope: ~3 months | Team size: 2

Public wiki administration and community management Feb 2010 - present

Wiki administrator / bureaucrat for kirby.wikia.com. My technical responsibilities include maintaining and implementing the custom theme, which I have overhauled from Wikia's default over several months, the templates in use, and the custom AJAX script + template wrapper used to pull soundtrack playlists off Youtube, to display them alongside documentation within a custom player.

Community management involves page patrols, user rights and site policy management, handling new announcements from Nintendo, and liaising with Wikia regarding updates and MediaWiki plugins.

Scope: ~4years, ongoing | Team size: N/A | URL: <http://kirby.wikia.com>

Education

University College London 2011 - present

MEng Computer Science, First class (expected, 2015)

Current institution of study.

Hokkaido Japanese Language School 2014

Japanese language

Month-long intensive course with home stay in Sapporo, Japan, to supplement my self study.

Imperial College London 2009 - 2011

MBBS Medicine

Withdrew during second year to transition to computer science. No credits transferable.

Concord College, Shrewsbury 2008 - 2009

A levels (Pre-A*)

AAAAab (Biology, Chemistry, Physics, Mathematics, AS English literature, AS Music)

- Outstanding Chemistry Student of the Year 2008
- Outstanding Music Student of the Year 2008
- Hovercraft, solar buggy races participant

Skills and interests

C# Java Python ASP.NET HTML CSS3 JavaScript TypeScript jQuery Backbone.js
 Knockout.js SQL MediaWiki

Interests

AI Machine learning Natural language processing Game theory Distributed systems UI/UX Design patterns
 Japanese language Social psychology Piano Erhu

Spoken languages

English Mandarin Malay

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